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IN THE CLAIMS

The Claims as they currently stand are presented below.

1. (Currently amended) A communication method for use in a dynamic network comprising:

allocating network resources of a dynamic network to a data stream based upon precedence levels of other data streams desiring the same resources or already utilizing the same
5   resources.

2. (Currently amended) The method recited in Claim 1 further comprising:

finding routes from a source to a destination that can be supported at a given precedence level;

~~notifying upstream nodes if the resources at that node are committed to higher~~
5   ~~precedence streams; and~~

~~notifying upstream nodes that an in-place stream may be interrupted by a new higher precedence stream.~~

3. (Currently amended) The method recited in Claim 2 wherein nodes track ~~the~~ control signaling in a routing database and use this retained information to either facilitate a route request or to ensure that low precedence control is not forwarded into portions of the network known to require higher precedence.

4. (Currently amended) The method recited in Claim 2 ~~wherein uninterrupted transport is assured by the method~~ comprising:

establishing a primary route for data flow of a given precedence from a first node to a second node of the network using resources available at that precedence or lower;
5   establishing a secondary route for data flow from the first node to the second node using resources available at that precedence or lower;

upon the occurrence of a failure of the primary route, switching the data flow from the primary route to the secondary route;

establishing a new secondary route for data flow from the first node to the second node
10   using signaling directed only to resources known to not be restricted to higher precedence levels;

repeating the above steps again and again as intra-node links of the network are established and broken.

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5. (Original) The method recited in Claim 4 wherein:

if a higher precedence flow is switched to a secondary route used by a lower precedence flow, the lower precedence flow is switched to its secondary route.

6. (Original) The method recited in Claim 4 wherein secondary routes at each precedence level are monitored for quality by:

sending low rate probe messages through the secondary routes;

if a fault is detected in a secondary route, establishing a new secondary route, even

5   though the new secondary route might never be used; and

if a secondary route is preempted by a flow with higher precedence, a new secondary route is established for the lower precedence flow.

7. (Currently amended) The method recited in Claim 4 wherein communication between nodes utilizes control messages are exchanged at a low rate between software agents at nodes of the network and are forwarded along active and secondary routes.

8. (Original) The method recited in Claim 7 wherein the control messages are handled at the same precedence level as their flows.

9. (Original) The method recited in Claim 7 wherein the agents respond to requests from other agents for node status, arbitrate resource allocation according to precedence, assess route failure probability, initiate restoral switchover, and maintain a local routing database.

10. (Original) The method recited in Claim 1 wherein network resource allocation is based upon link bandwidth.

11. (Canceled)

12. (Canceled)

13. (Canceled)

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14. (Currently amended) A communication method for use in a dynamic network comprising:

allocating network resources to a data stream based upon precedence levels of other data streams desiring the same resources or already utilizing the same resources; and

5   finding routes from a source to a destination that can be supported at a given precedence level;

~~notifying upstream nodes if the resources at that node are committed to higher precedence streams; and~~

~~notifying upstream nodes that an in place stream may be interrupted by a new higher~~
10   ~~precedence stream.~~

15. (Currently amended) The method recited in Claim 14 wherein nodes track ~~the~~ control signaling in a routing database and use this retained information to either facilitate a route request or to ensure that low precedence control is not forwarded into portions of the network known to require higher precedence.

16. (Currently amended) The method recited in Claim 14 ~~wherein uninterrupted transport is assured by the method~~ comprising:

establishing a primary route for data flow of a given precedence from a first node to a second node of the network using resources available at that precedence or lower;

5   establishing a secondary route for data flow from the first node to the second node using resources available at that precedence or lower;

upon the occurrence of a failure of the primary route, switching the data flow from the primary route to the secondary route;

establishing a new secondary route for data flow from the first node to the second node
10   using signaling directed only to resources known to not be restricted to higher precedence levels;

repeating the above steps again and again as intra-node links of the network are established and broken.

17. (Previously presented) The method recited in Claim 16 wherein:

if a higher precedence flow is switched to a secondary route used by a lower precedence flow, the lower precedence flow is switched to its secondary route.

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18. (Previously presented) The method recited in Claim 16 wherein secondary routes at each precedence level are monitored for quality by:

sending low rate probe messages through the secondary routes;

if a fault is detected in a secondary route, establishing a new secondary route, even

5   though the new secondary route might never be used; and

if a secondary route is preempted by a flow with higher precedence, a new secondary route is established for the lower precedence flow.

19. (Currently amended) The method recited in Claim 16 wherein <u>communication between nodes utilizes</u> control messages are exchanged at a low rate between software agents at nodes of the network and are forwarded along active and secondary routes.

20. (Previously presented) The method recited in Claim 19 wherein the control messages are handled at the same precedence level as their flows.